

**THE CITY OF FREDERICK
MAYOR AND BOARD OF ALDERMEN**

ORDINANCE NO: G-21-21

AN ORDINANCE concerning floodplain management

FOR the purpose of obtaining compliance with current state and federal standards; clarifying language; and otherwise generally relating to floodplain management within The City of Frederick

BY repealing

Chapter 25

Article VII

The Code of the City of Frederick, 1966 (as amended)

BY adding

Chapter 31

The Code of the City of Frederick, 1966 (as amended)

BACKGROUND

The Federal Emergency Management Agency has identified special flood hazard areas within the City Boundary. Special flood hazard areas are subject to periodic inundation, which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare. Structures that are inadequately elevated, improperly floodproofed, or otherwise unprotected from flood damage also contribute to flood losses. The City of Frederick, by resolution adopted on May 3, 1973, agreed to meet the requirements of the National Flood Insurance Program. The City was accepted for participation in the program on October 18, 1974. As of that date or as of June 15, 1978, the initial effective date of the City of Frederick Flood Insurance Rate Map, all development and new construction must comply with certain floodplain regulations. This chapter is intended to ensure such compliance.

SECTION I. BE IT ENACTED AND ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF FREDERICK, That Chapter 25, Article VII of The Code of the City of Frederick, 1966 (as amended) is hereby repealed and a new Chapter 31 is added to read as follows:

**CHAPTER 31
FLOODPLAIN MANAGEMENT**

ARTICLE I. GENERAL PROVISIONS.

§ 31-1. Authority.

This chapter is adopted pursuant to the authority of the Maryland Code, Land Use Article, Title 4, which establishes as a policy of the State of Maryland that the orderly development and use of land and structures requires comprehensive regulation through the implementation of planning and zoning control, and that planning and zoning controls shall be implemented by local government in order to, among other purposes, secure the public safety, promote health and general welfare, and promote the conservation of natural resources.

§ 31-2. Purpose and scope.

- (a) **Purpose.** The purposes of this chapter are to promote the public health, safety and general welfare, and to:
- (1) protect human life, health, and welfare;
 - (2) encourage appropriate construction practices in order to prevent or minimize flood damage in the future;
 - (3) minimize flooding of water supply and sanitary sewage disposal systems;
 - (4) maintain natural drainage;
 - (5) reduce financial burdens imposed on the community, its governmental units, and its residents, by discouraging unwise designs and construction of development in areas subject to flooding;
 - (6) minimize the need for rescue and relief efforts associated with flooding and generally taken at the expense of the general public;
 - (7) minimize prolonged business interruptions;
 - (8) minimize damage to public facilities and other utilities such as water and gas mains, electric, telephone, and sewer lines, streets, and bridges;
 - (9) reinforce that those who build in and occupy special flood hazard areas should assume responsibility for their actions;
 - (10) minimize the impact of development on adjacent properties within and near flood-prone areas;
 - (11) provide that the flood storage and conveyance functions of floodplains are maintained;
 - (12) minimize the impact of development on adjacent properties within and near flood-prone areas;
 - (13) provide that the flood storage and conveyance functions of floodplains are maintained;
 - (14) minimize the impact of development on the natural and beneficial functions of floodplains;
 - (15) prevent floodplain uses that are either hazardous or environmentally incompatible; and
 - (16) meet community participation requirements of the National Flood Insurance Program as set forth in the Code of Federal Regulations (CFR) at 44 CFR § 59.22.

(b) Scope.

- (1)** This chapter applies to all special flood hazard areas within the jurisdiction of the City and identified in this section.
- (2)** If the City Boundary is modified through annexation, the Floodplain Administrator shall notify FEMA and provide a map showing the new City Boundary. If the FIRM for any annexed area includes special flood hazard areas that have flood zones with regulatory requirements that are not set forth in this chapter, within 6 months after the date of annexation the City should adopt the FIRM and appropriate requirements. The Floodplain Administrator shall provide a copy of the amended chapter to MDE (NFIP State Coordinator) and FEMA.

§ 31-3. Basis for establishing special flood hazard areas and BFEs.

- (a)** For the purposes of this chapter, the minimum basis for establishing special flood hazard areas and base flood elevations is the Flood Insurance Study for Frederick County, Maryland and Incorporated Areas dated September 19, 2007, or the most recent revision thereof, and the accompanying Flood Insurance Rate Maps and all subsequent amendments and revisions to the FIRMs. The FIS and FIRMs are retained on file and available to the public at the offices of the City of Frederick, Engineering Division, 140 W. Patrick St., Frederick, Maryland 21701.
- (b)** Where field surveyed topography or digital topography indicates that ground elevations are below the closest applicable base flood elevation, even in areas not delineated as a special flood hazard on the FIRM, the area is considered as special flood hazard area.
- (c)** To establish base flood elevations in special flood hazard areas that do not have those elevations shown on the FIRM, the Floodplain Administrator may provide the best available data for base flood elevations, require the applicant to obtain available information from Federal, State or other sources, or require the applicant to establish special flood hazard areas and base flood elevations as set forth in this chapter.

§ 31-4. Abrogation and greater restrictions.

Nothing in this chapter is intended to repeal or abrogate any existing regulations, including the City's subdivision regulations, zoning regulations, or building codes, or any existing easements, covenants, or deed restrictions. In the event of a conflict between this chapter and any other provision of the City Code, the more restrictive shall govern.

§ 31-5. Interpretation.

In the interpretation and application of this chapter, all provisions shall be considered as minimum requirements, liberally construed in favor of the City, and deemed neither to limit nor repeal any other powers granted under state statutes.

§ 31-6. Disclaimer of liability.

The degree of flood protection provided by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur, and flood heights may be increased by manmade or natural causes. This chapter does not

imply that land outside of the special flood hazard areas or uses that are permitted within those areas will be free from flooding or flood damage. This chapter does not create liability on the part of the City, any City official or employee, MDE, or FEMA for any damage that may result from reliance on this chapter or any administrative decision lawfully made under this chapter.

§ 31-7. Definitions and references.

- (a) **Definitions.** Unless specifically defined in this section, words or phrases used in this chapter will be interpreted to have the meaning they have in common usage and to provide the most reasonable application. The following terms have the meanings given:
- (1) "Accessory structure" means a building or structure on the same lot with, and of a nature customarily incidental and subordinate to, the principal structure. For the purposes of this chapter, an accessory structure shall be used solely for parking of vehicles and limited storage.
 - (2) "Agreement to submit an elevation certificate" is a form on which the applicant for a permit to construct a building or structure, to construct certain horizontal additions, to place or replace a manufactured home, to substantially improve a building, structure, or manufactured home, agrees to have an elevation certificate prepared by a licensed professional engineer or licensed professional surveyor, as specified by the Floodplain Administrator, and to submit the certificate:
 - (A) upon placement of the lowest floor and prior to further vertical construction; and
 - (B) prior to the final inspection and issuance of the certificate of occupancy.
 - (3) "Alteration of a watercourse" includes, but is not limited to, widening, deepening or relocating the channel, including excavation or filling of the channel. "Alteration of a watercourse" does not include construction of a road, bridge, culvert, dam, or in-stream pond unless the channel is proposed to be realigned or relocated as part of such construction.
 - (4) "Area of shallow flooding" is a designated Zone AO on the Flood Insurance Rate Map with a 1% annual chance or greater of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident; such flooding is characterized by ponding or sheet flow.
 - (5) "Base building" means the building to which an addition is being added.
 - (6) "Base flood" means having a 1% chance of being equaled or exceeded in any given year; the base flood also is referred to as the 1% annual chance (100-year) flood.
 - (7) "Base flood elevation" means the water surface elevation of the base flood in relation to the datum specified on the community's Flood Insurance Rate Map. In areas of shallow flooding, the base flood elevation is the highest adjacent natural grade elevation plus the depth number specified in feet on the Flood Insurance Rate Map, or at least 4 feet if the depth number is not specified.

- (8) "Basement" means any area of the building having its floor subgrade (below ground level) on all sides.
- (9) "Critical and essential facilities" means buildings and other structures that are intended to remain operational in the event of extreme environmental loading from flood, wind, snow or earthquakes. Critical and essential facilities typically include hospitals, fire stations, police stations, storage of critical records, facilities that handle or store hazardous materials, and similar facilities.
- (10) "Declaration of land restriction", also known as a "nonconversion agreement", is a form signed by the owner to agree not to convert or modify in any manner that is inconsistent with the terms of the permit and these regulations, certain enclosures below the lowest floor of elevated buildings, and certain accessory structures. The form requires the owner to record it on the property deed to inform future owners of the restrictions.
- (11) "Development" means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, placement of manufactured homes, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.
- (12) "Elevation certificate" is a FEMA form on which surveyed elevations and other data pertinent to a property and a building are identified and which shall be completed by a licensed professional land surveyor or a licensed professional engineer, as specified by the Floodplain Administrator. When used to document the height above grade of buildings in special flood hazard areas for which base flood elevation data are not available, the Elevation Certificate must be completed in accordance with the instructions issued by FEMA.
- (13) "Enclosure below the lowest floor" means an unfinished or flood-resistant enclosure that is located below an elevated building, is surrounded by walls on all sides, and is usable solely for parking of vehicles, building access or storage, in an area other than a basement area, provided that such enclosure is built in accordance with the applicable design requirements specified in these regulations.
- (14) Federal Emergency Management Agency (FEMA) is the federal agency with the overall responsibility for administering the National Flood Insurance Program.
- (15) "Flood" or "flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from:
 - (A) the overflow of inland or tidal waters, or
 - (B) the unusual and rapid accumulation or runoff of surface waters from any source.
- (16) "Flood damage-resistant materials" are capable of withstanding direct and prolonged contact with floodwaters without sustaining any damage that requires more than cosmetic repair.

- (17) Flood Insurance Rate Map (FIRM) is an official map on which the Federal Emergency Management Agency has delineated special flood hazard areas to indicate the magnitude and nature of flood hazards, to designate applicable flood zones, and to delineate floodways, if applicable. FIRMs that have been prepared in digital format or converted to digital format are referred to as Digital FIRMs (DFIRM).
- (18) Flood Insurance Study (FIS) is the official report in which the Federal Emergency Management Agency has provided flood profiles, floodway information, and the water surface elevations.
- (19) "Flood opening" (non-engineered) is an opening that is used to meet the prescriptive requirement of 1 square inch of net open area for every square foot of enclosed area. An engineered flood opening is an opening that is designed and certified by a licensed professional engineer or licensed architect as meeting certain performance characteristics, including providing automatic entry and exit of floodwaters; this certification requirement may be satisfied by an individual certification for a specific structure or issuance of an Evaluation Report by the ICC Evaluation Service, Inc.
- (20) "Flood protection elevation" means the base flood elevation plus 2 feet of freeboard.
- (21) "Flood protection setback" means a distance measured perpendicular to the top of bank of a watercourse that delineates an area to be left undisturbed to minimize future flood damage and to recognize the potential for bank erosion. Along nontidal waters of the State, the flood protection setback is:
- (A) 100 feet, if the watercourse has special flood hazard areas shown on the FIRM, except where the setback extends beyond the boundary of the flood hazard area; or
 - (B) 50 feet, if the watercourse does not have special flood hazard areas shown on the FIRM.
- (22) "Flood zone" is a designation for areas that are shown on the FIRMs, as follows:
- (A) Zone A: Special flood hazard areas subject to inundation by the 1% annual chance (100-year) flood; base flood elevations are not determined.
 - (B) Zone AE and Zone A1-30: Special flood hazard areas subject to inundation by the 1% annual chance (100-year) flood; base flood elevations are determined, but floodways may or may not be determined.
 - (C) Zone AH and Zone AO: Areas of shallow flooding, with flood depths of 1 to 3 feet (usually areas of ponding or sheet flow on sloping terrain), with or without BFEs or designated flood depths.
 - (D) Zone B and Zone X (shaded): Areas subject to inundation by the 0.2% annual chance (500-year) flood; areas subject to the 1% annual chance (100-year) flood with average depths of less than 1 foot or with contributing

drainage area less than 1 square mile; and areas protected from the base flood by levees.

- (E) Zone C and Zone X (unshaded): Areas outside of zones designated A, AE, A1-30, AO, B, and X (shaded).
- (23) "Floodplain" means a land area susceptible to being inundated by water from any source.
- (24) "Floodplain Review Board" is the administrative agency established under this chapter to hear and decide requests for variances and appeals.
- (25) "Floodproofing" or "floodproofed" means any combination of structural and nonstructural additions, changes, or adjustments to buildings or structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents such that the buildings or structures are watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
- (26) "Floodproofing certificate" is a FEMA form that is to be completed, signed and sealed by a licensed professional engineer or licensed architect to certify that the design of floodproofing and proposed methods of construction are in accordance with the applicable requirements of this chapter.
- (27) "Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to pass the base flood discharge such that the cumulative increase in the water surface elevation of the base flood discharge is no more than a designated height. When shown on a FIRM, the floodway is referred to as the "designated floodway."
- (28) "Freeboard" is a factor of safety that compensates for uncertainty in factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, obstructed bridge openings, debris and ice jams, climate change, and the hydrologic effect of urbanization in a watershed. See "flood protection elevation".
- (29) "Free-of-obstruction" is a term that describes open foundations (pilings, columns, or piers) without attached elements or foundation components that would obstruct the free passage of floodwaters and waves beneath structures that are elevated on such foundations.
- (30) "Functionally dependent use" is a use which cannot be performed for its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or manufacturing facilities.
- (31) "Highest adjacent grade" is the highest natural elevation of the ground surface, prior to construction, next to the proposed foundation of a structure.

- (32) "Historic structure" is any structure that is:
- (A) individually listed in the National Register of Historic Places or preliminarily determined by the Secretary of the Interior to meet the requirements for individual listings on the National Register;
 - (B) certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
 - (C) individually listed on the Maryland Register of Historic Places; or
 - (D) designated as a historic structure under LMC § 423.
- (33) "Hydrologic and hydraulic engineering analyses" are analyses performed by a licensed professional engineer, in accordance with standard engineering practices that are accepted by MDE and FEMA, and used to determine the base flood, other frequency floods, flood elevations, floodway information and boundaries, and flood profiles.
- (34) Letter of Map Change (LOMC) is an official FEMA determination, by letter, that amends or revises an effective FIRM or FIS. LOMCs include:
- (A) Letter of Map Amendment (LOMA): An amendment based on technical data showing that a property was incorrectly included in a designated special flood hazard area. A LOMA amends the current effective FIRM and establishes that a specific property or structure is not located in a special flood hazard area.
 - (B) Letter of Map Revision (LOMR): A revision based on technical data that may show changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features. A LOMR Based on Fill (LOMR-F), is a determination that a structure or parcel of land has been elevated by fill above the base flood elevation and is, therefore, no longer exposed to flooding associated with the base flood. In order to qualify for this determination, the fill must have been permitted and placed in accordance this chapter.
 - (C) Conditional Letter of Map Revision (CLOMR): A formal review and comment as to whether a proposed flood protection project or other project complies with the minimum NFIP requirements for such projects with respect to delineation of special flood hazard areas. A CLOMR Based on Fill (CLOMR-F) is a determination that a parcel of land or proposed structure that will be elevated by fill would not be inundated by the base flood if fill is placed on the parcel as proposed or the structure is built as proposed. A CLOMR does not revise the effective FIRM or FIS. Upon submission and approval of certified as-built documentation, a Letter of Map Revision may be issued by FEMA, to revise the effective FIRM.

- (35) "Licensed" refers to a professional who is authorized to practice in the State of Maryland by the Maryland Board of Architects, Maryland Board of Professional Engineers, Maryland Board of Professional Land Surveyors, or the Maryland Real Estate Appraisers and Home Inspectors Commission.
- (36) "Lowest floor" means the lowest floor of the lowest enclosed area (including basement) of a building or structure; the floor of an enclosure below the lowest floor is not the lowest floor provided the enclosure is constructed in accordance with these regulations. The lowest floor of a manufactured home is the bottom of the lowest horizontal supporting member (longitudinal chassis frame beam).
- (37) "Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. "Manufactured home" does not include a recreational vehicle.
- (38) "Market value" means the price at which a property will change hands between a willing buyer and a willing seller, neither party being under compulsion to buy or sell and both having reasonable knowledge of relevant facts. For the purposes of these regulations, the market value of a building is determined by a licensed real estate appraiser or the most recent, full phased-in assessment value of the building (improvement) determined by the Maryland Department of Assessments and Taxation.
- (39) Maryland Department of the Environment (MDE) is a principal department of the State of Maryland that is charged with, among other responsibilities, the coordination of the National Flood Insurance Program in Maryland (NFIP State Coordinator) and the administration of regulatory programs for development and construction that occur within the waters of the State, including nontidal wetlands, nontidal waters and floodplains, and State and private tidal wetlands (Tidal Wetlands). Unless otherwise specified, "MDE" refers to the Department's Wetlands and Waterways Program.
- (40) "Mixed-use structure" means any structure that is used or intended to be used for both nonresidential and residential uses.
- (41) National Flood Insurance Program (NFIP) is the program authorized under 42 U.S.C. §§ 4001-4129. The NFIP makes flood insurance coverage available in communities that agree to adopt and enforce minimum regulatory requirements for development in areas prone to flooding.
- (42) "New construction" refers to structures, including additions and improvements, and the placement of manufactured homes, the construction of which began on or after June 15, 1978 (the initial effective date of the City's FIRM), and including any subsequent improvements, alterations, modifications, or additions to those structures, additions, improvements, or manufactured homes.
- (43) "Nontidal waters of the State" refers to any stream or body of water within the State that is subject to State regulation, including the 100-year frequency floodplain of free-flowing waters. The boundary between the tidal and nontidal waters of the State is the tidal wetlands boundary.

- (44) "Recreational vehicle" means a vehicle that is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, designed to be self-propelled or permanently towable by a light duty truck, and designed primarily for use not as a permanent dwelling, but as temporary living quarters for recreation, camping, or travel.
- (45) "Repetitive loss" means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equal or exceed 25% of the market value of the structure before the damage occurred.
- (46) Special Flood Hazard Area (SFHA) is the land in the floodplain subject to a 1% or greater chance of flooding in any given year. SFHAs are designated by FEMA in FIS and on FIRMs as Zones A, AE, AH, AO, A1-30, and A99. SFHAs also include areas shown on other flood maps that are identified in § 31-3 of this article.
- (47) "Start of construction" means the date a building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory structures, such as garages or sheds not occupied as dwelling units or not part of the main structure. For substantial improvements, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.
- (48) "Structure" means that which is built or constructed. "Structure" includes a walled and roofed building, a gas or liquid storage tank that is principally above ground, and a manufactured home.
- (49) "Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its previous condition would be 50% or more of the market value of the structure before the damage occurred. Also used as "substantially damaged" structures.
- (50) "Substantial improvement" means any combination of repairs, reconstruction, rehabilitation, addition, or other improvement of a structure taking place during a period of 10 years, the cumulative cost of which equals or exceeds 50% of the market value of the structure before the start of construction of the improvement. This term includes structures that have incurred "repetitive loss" or "substantial damage," regardless of the actual repair work performed. "Substantial improvement" applies to structures that have incurred substantial damage, regardless of the actual repair work performed, but excludes:

- (A) any project for improvement of a structure to correct existing violations of the City's Building Code, technical codes, Property Maintenance Code, Land Management Code, or State health regulations, which have been identified by the local code official prior to submission of an application for a permit and which are the minimum necessary to assure safe living conditions; and
 - (B) any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.
- (51) "Temporary structure" means a structure installed, used, or erected for a period of less than 180 days.
- (52) "Top of bank" means the point where the level of water rises above the normal channel and spreads out to the floodplain.
- (53) "Variance" is a grant of relief from the strict application of one or more requirements of this chapter.
- (54) "Violation" is any construction or development in a special flood hazard area that is being performed without a valid permit or the failure of a permit holder to comply with this chapter or the conditions of the permit. A structure or other development without the required design certifications, elevation certificate, or other evidence of compliance is presumed to be in violation until the required documentation is provided.
- (55) "Watercourse" is the channel, including channel banks and bed, of nontidal waters of the State.
- (56) "Waters of the State" include:
 - (A) surface and underground waters within the boundaries of the State subject to its jurisdiction;
 - (B) that portion of the Atlantic Ocean within the boundaries of the State;
 - (C) the Chesapeake Bay and its tributaries;
 - (D) all ponds, lakes, rivers, streams, public ditches, tax ditches, and public drainage systems within the State, other than those designed and used to collect, convey, or dispose of sanitary sewage; and
 - (E) the floodplain of free-flowing waters determined by MDE on the basis of the 100-year flood frequency.
- (b) **References.** Notes referencing publications of the Federal Emergency Management Agency (FEMA) refer to the most recent edition of those publications, are intended only as guidance, and do not bind or alter the authority of the Floodplain Administrator to interpret and apply the regulations set forth in this chapter.

ARTICLE II. ADMINISTRATION

§ 31-8. Floodplain Administrator.

- (a) **Appointment.** The City Engineer is hereby appointed to administer and implement this chapter and is referred to in this chapter as the Floodplain Administrator. The Floodplain Administrator may delegate duties and responsibilities set forth in this chapter to qualified technical personnel, plan examiners, inspectors, and other employees.
- (b) **Duties.** The Floodplain Administrator shall:
- (1) review applications for permits to determine whether proposed activities will be located in flood hazard areas;
 - (2) interpret floodplain boundaries and provide available base flood elevation and flood hazard information.
 - (3) review applications to determine whether proposed activities will be reasonably safe from flooding and require new construction and substantial improvements to meet the requirements of this chapter;
 - (4) review applications to determine whether all necessary permits have been obtained from the Federal, State or local agencies from which prior or concurrent approval is required; in particular, permits from MDE for any construction, reconstruction, repair, or alteration of a dam, reservoir, or waterway obstruction (including bridges, culverts, structures), any alteration of a watercourse, or any change of the course, current, or cross section of a stream or body of water, including any change to the 100-year frequency floodplain of free-flowing nontidal waters of the State;
 - (5) verify that applicants proposing an alteration of a watercourse have notified adjacent communities and MDE (NFIP State Coordinator), and have submitted copies of such notifications to FEMA;
 - (6) approve applications and issue permits to develop in flood hazard areas if the provisions of this chapter have been met, or disapprove applications if the provisions of this chapter have not been met;
 - (7) inspect or cause to be inspected, buildings, structures, and other development for which permits have been issued to determine compliance with this chapter or to determine if non-compliance has occurred or violations have been committed;
 - (8) review elevation certificates and require incomplete or deficient certificates to be corrected;
 - (9) submit to FEMA, or require applicants to submit to FEMA, data and information necessary to maintain FIRMs, including hydrologic and hydraulic engineering analyses prepared by or for the City within six months after such data and information becomes available if the analyses indicate changes in base flood elevations or boundaries;

- (10) maintain and permanently keep records that are necessary for the administration of this chapter, including:
 - (A) Flood Insurance Studies, Flood Insurance Rate Maps (including historic studies and maps and current effective studies and maps) and Letters of Map Change; and
 - (B) documentation supporting issuance and denial of permits, elevation certificates, documentation of the elevation (in relation to the datum on the FIRM) to which structures have been floodproofed, other required design certifications, variances, and records of enforcement actions taken to correct violations of these regulations;
- (11) investigate violations, issue notices of violations or stop work orders, require permit holders to take corrective action, and otherwise enforce this chapter;
- (12) advise the Floodplain Review Board regarding the intent of this chapter and, for each application for a variance, prepare a staff report and recommendation;
- (13) administer the requirements related to proposed work on existing buildings;
- (14) make determinations as to whether buildings and structures that are located in flood hazard areas and that are damaged by any cause have been substantially damaged;
- (15) make reasonable efforts to notify owners of substantially damaged structures of the need to obtain a permit to repair, rehabilitate, or reconstruct, and prohibit the non-compliant repair of substantially damaged buildings except for temporary emergency protective measures necessary to secure a property or stabilize a building or structure to prevent additional damage;
- (16) issue press releases, public service announcements, and other public information materials related to permit requests and repair of damaged structures; coordinate with Federal, State, and local agencies to assist with substantial damage determinations; provide owners of damaged structures information related to the proper repair of damaged structures in special flood hazard areas; assist property owners with documentation necessary to file claims for Increased Cost of Compliance (ICC) coverage under NFIP flood insurance policies; and
- (17) upon the request of FEMA, complete and submit a report concerning participation in the NFIP, including information regarding the number of buildings in the SFHA, number of permits issued for development in the SFHA, and number of variances issued for development in the SFHA.

§ 31-9. Agreement with other entity.

The City may enter into a written agreement with another Maryland government or private sector entity to administer specific provisions of this chapter. Administration by another entity shall not relieve the City of its responsibilities pursuant to the participation requirements of the National Flood Insurance Program as set forth in the Code of Federal Regulations (CFR) at 44 CFR § 59.22.

§ 31-10. Use and interpretation of FIRMS.

- (a) **Floodplain Administrator.** The Floodplain Administrator shall make interpretations, where needed, as to the exact location of special flood hazard areas, floodplain boundaries, and floodway boundaries.
- (b) **In general.** The following shall apply to the use and interpretation of FIRMs and data:

 - (1) Where field surveyed topography indicates that ground elevations are below the base flood elevation, even in areas not delineated as a special flood hazard area on a FIRM, the area shall be considered as special flood hazard area and subject to the requirements of this chapter.
 - (2) Where field surveyed topography indicates that ground elevations are above the base flood elevation, the area shall be regulated as special flood hazard area unless the applicant obtains a Letter of Map Change that removes the area from the special flood hazard area.
 - (3) In FEMA-identified special flood hazard areas where base flood elevation and floodway data have not been identified and in areas where FEMA has not identified special flood hazard areas, any other flood hazard data available from a Federal, State, or other source shall be reviewed and reasonably used.
 - (4) Base flood elevations and designated floodway boundaries on FIRMs and in FISs shall take precedence over base flood elevations and floodway boundaries by any other sources if such sources show reduced floodway widths and/or lower base flood elevations.
 - (5) Other sources of data shall be reasonably used if such sources show increased base flood elevations and/or larger floodway areas than are shown on FIRMs and in FISs.
 - (6) If a Preliminary Flood Insurance Rate Map and/or a Preliminary Flood Insurance Study has been provided by FEMA:

 - (A) Upon the issuance of a Letter of Final Determination by FEMA, if the preliminary flood hazard data is more restrictive than the effective data, it shall be used and shall replace the flood hazard data previously provided from FEMA for the purposes of administering these regulations.
 - (B) Prior to the issuance of a Letter of Final Determination by FEMA, the use of preliminary flood hazard data shall be deemed the best available data

pursuant to §31-3(C) of this chapter and used where no base flood elevations and/or floodway areas are provided on the effective FIRM.

- (C) Prior to issuance of a Letter of Final Determination by FEMA, the use of preliminary flood hazard data is permitted where the preliminary base flood elevations, floodplain or floodway boundaries exceed the base flood elevations and/or designated floodway widths in existing flood hazard data provided by FEMA. Such preliminary data may be subject to change and/or appeal to FEMA.

§ 31-11. Permits – Generally.

- (a) **City permit.** A person may not begin any development or construction wholly within, partially within, or in contact with any flood hazard area established in this chapter, including but not limited to: filling; grading; construction of new structures; the substantial improvement of buildings or structures, including repair of substantial damage; placement or replacement of manufactured homes, including substantial improvement or repair of substantial damage of manufactured homes; erecting or installing a temporary structure, or alteration of a watercourse, without first obtaining a permit from the City Engineer. A permit will be issued only if the requirements of this chapter have been met.
- (b) **State permit.** In addition to the permits required pursuant to subsection (a) of this section, MDE may require state permits, and therefore applicants for permits in nontidal waters of the State are advised to contact MDE. Unless waived by MDE, pursuant to COMAR 26.17.04, MDE regulates the “100-year frequency floodplain of free-flowing waters,” also referred to as nontidal waters of the State. To determine the 100-year frequency floodplain, hydrologic calculations are based on the ultimate development of the watershed, assuming existing zoning. The resulting flood hazard areas delineated using the results of such calculations may be different than the special flood hazard areas established in this chapter.
- (c) **Expiration.** A permit is valid provided the actual start of work is within 180 days of the date of permit issuance. Requests for extensions must be submitted in writing and justifiable cause demonstrated. The Floodplain Administrator may grant, in writing, one or more extensions of time, provided there has been no amendment or revision to the basis for establishing special flood hazard areas and BFEs.

§ 31-12. Permits – application.

- (a) **In general.** Application for a permit shall be made by the owner of the property or the owner’s authorized agent (referred to in this chapter as the applicant) prior to the start of any work. The application shall be on a form furnished for that purpose.
- (b) **Required information.** Applications shall include the information described in this subsection as well as any other information reasonably required by the Floodplain Administrator, including but not limited to:
 - (1) site plans drawn to scale showing the nature, location, dimensions, and existing and proposed topography of the area in question, and the location of existing and proposed structures, excavation, filling, storage of materials, drainage facilities, and other proposed activities;

- (2) elevation of the existing natural ground where buildings or structures are proposed, referenced to the datum on the FIRM;
- (3) delineation of flood hazard areas, designated floodway boundaries, flood zones, base flood elevations, and flood protection setbacks, where base flood elevations shall be used to delineate the boundary of flood hazard areas and such delineations shall prevail over the boundary of SFHAs shown on FIRMs;
- (4) determination of the base flood elevations, for development proposals and subdivision proposals, each with at least 5 lots or at least 5 acres, whichever is the lesser, in special flood hazard areas where base flood elevations are not shown on the FIRM; if hydrologic and hydraulic engineering analyses are submitted, such analyses shall be performed in accordance with the requirements and specifications of MDE and FEMA;
- (5) hydrologic and hydraulic engineering analyses for proposals in special flood hazard areas where FEMA has provided base flood elevations but has not delineated a floodway; such analyses shall demonstrate that the cumulative effect of proposed development, when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood by more than one foot, or a lower increase if required by MDE;
- (6) for encroachments in floodways, an evaluation of alternatives to such encroachments, including different uses of the site or portion of the site within the floodway, and minimization of such encroachment;
- (7) the intended purpose of the fill, if any, the application proposes to be placed for a purpose other than to elevate structures;
- (8) for proposed buildings and structures, including substantial improvement and repair of substantial damage, and placement and replacement of manufactured homes, including substantial improvement and repair of substantial damage:
 - (A) the proposed elevation of the lowest floor, including basement referenced to the datum on the FIRM and a signed Agreement to Submit an Elevation Certificate;
 - (B) the signed Declaration of Land Restriction (Nonconversion Agreement) that must be recorded on the property deed prior to issuance of the Certificate of Occupancy, if the application includes an enclosure below the lowest floor or a crawl/underfloor space that is more than 4 feet in height; and
 - (C) a written evaluation of alternative methods considered to elevate structures and manufactured homes, if the location is in nontidal waters of the State and fill is proposed to achieve the elevation required under this chapter;
- (9) for accessory structures that are 300 square feet or larger in area (footprint) but no larger than 600 square feet in area (footprint) and that are below the base flood elevation, a variance is required as set forth in Article V of this chapter. If a variance

is granted, a signed Declaration of Land Restriction (Nonconversion Agreement) must be recorded on the property deed prior to issuance of the Certificate of Occupancy;

- (10) for temporary structures and temporary storage, specification of the duration of the temporary use;
- (11) for proposed work on existing buildings, structure, and manufactured homes, including any improvement, addition, repairs, alterations, rehabilitation, or reconstruction, sufficient information to determine if the work constitutes substantial improvement or repair of substantial damage, including but not limited to:
 - (A) if the existing building or structure was constructed after June 15, 1978, evidence that the work will not alter any aspect of the building or structure that was required for compliance with the floodplain management requirements in effect at the time the building or structure was permitted;
 - (B) if the proposed work is a horizontal addition, a description of the addition and whether it will be independently supported or structurally connected to the base building and the nature of all other modifications to the base building, if any;
 - (C) documentation of the market value of the building or structure before the improvement or, if the work is repair of damage, before the damage occurred; and
 - (D) documentation of the actual cash value of all proposed work, including the actual cash value of all work necessary to repair and restore damage to the before-damaged condition, regardless of the amount of work that will be performed. The value of work performed by the owner or volunteers shall be valued at market labor rates; the value of donated or discounted materials shall be valued at market rates;
- (12) certifications or technical analyses prepared or conducted by a licensed professional engineer or licensed architect, as appropriate, including:
 - (A) the determination of the base flood elevations or hydrologic and hydraulic engineering analyses prepared by a licensed professional engineer that are required by the Floodplain Administrator or are required by this chapter;
 - (B) the floodproofing certificate for nonresidential structures that are floodproofed as required under this chapter; and
 - (C) certification that engineered flood openings are designed to meet the minimum requirements of this chapter to automatically equalize hydrostatic flood forces;
- (13) for nonresidential structures that are proposed with floodproofing, an operations and maintenance plan as specified in this chapter;

- (14) where floodways are not delineated or base flood elevations are not shown on the FIRMs, the Floodplain Administrator has the authority to require the applicant to use information provided by the Floodplain Administrator, information that is available from Federal, State, or other sources, or to determine such information using accepted engineering practices or methods approved by the Floodplain Administrator; and
 - (15) any other material and information requested by the Floodplain Administrator and necessary to determine conformance with this chapter.
- (c) **Letter of Map Change.** The applicant may seek a Letter of Map Change by submitting new technical data to FEMA, such as base maps, topography, and engineering analyses to support revision of floodplain and floodway boundaries and/or base flood elevations. Such submissions shall be prepared in a format acceptable to FEMA and any fees shall be the sole responsibility of the applicant. A copy of the submittal must be attached to the application for a permit. If the applicant submits new technical data to support any change in floodplain and designated floodway boundaries and/or base flood elevations but has not sought a Letter of Map Change from FEMA, the applicant shall submit such data to FEMA as soon as practicable, but not later than 6 months after the date such information becomes available. Such submissions must be prepared in a format acceptable to FEMA and any fees shall be the sole responsibility of the applicant.

§ 31-13. Review of Application.

- (a) **In general.** The Floodplain Administrator shall review applications for development in special flood hazard areas to determine the completeness of information submitted and notify the applicant if the application is incomplete or additional information is required to support the application.
- (b) **State and federal permits.** The Floodplain Administrator will notify applicants that permits from MDE, the U.S. Army Corps of Engineers, and other State and Federal authorities may be required. The Floodplain Administrator will review all permit applications to assure that all necessary permits have been received from the Federal, State or local governmental agencies from which prior approval is required. The applicant shall be responsible for obtaining such permits, including permits issued by:
 - (1) the U.S. Army Corps of Engineers under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act;
 - (2) MDE pursuant to COMAR 26.23 (Nontidal Wetlands) and Section 401 of the Clean Water Act;
 - (3) MDE for construction on nontidal waters of the State pursuant to COMAR 26.17.04; and
 - (4) MDE pursuant to COMAR 26.24 (Tidal Wetlands).
- (c) The Floodplain Administrator shall review applications for compliance with this article after all information required in § 31-12 of this article or identified and required by the Floodplain Administrator has been received.

§ 31-14. Inspections

- (a) In general.** The Floodplain Administrator shall make periodic inspections of development permitted in special flood hazard areas, at appropriate times throughout the period of construction in order to monitor compliance.
- (b) Types of inspection.** Inspections required under this section may include any one or more of the following:
 - (1)** stake-out inspection, to determine location on the site relative to the flood hazard area and designated floodway;
 - (2)** foundation inspection, upon placement of the lowest floor and prior to further vertical construction, to collect information or certification of the elevation of the lowest floor;
 - (3)** inspection of enclosures below the lowest floor, including crawl/underfloor spaces, to determine compliance with applicable provisions;
 - (4)** utility inspection, upon installation of specified equipment and appliances, to determine appropriate location with respect to the base flood elevation; and
 - (5)** final inspection prior to issuance of the certificate of occupancy.

§ 31-15. Submissions required prior to final inspection

Pursuant to the Agreement to Submit an Elevation Certificate submitted with the application, the permittee shall have an elevation certificate prepared and submitted prior to final inspection and issuance of a certificate of occupancy for elevated structures and manufactured homes, including new structures and manufactured homes, substantially-improved structures and manufactured homes, and additions to structures and manufactured homes.

ARTICLE III. REQUIREMENTS IN ALL FLOOD HAZARD AREAS.

§ 31-16. Scope.

The general requirements of this article apply to all development proposed within all special flood hazard areas identified in section 31-3 of this chapter.

§ 31-17. Subdivision proposals and development proposals.

- (a) All flood zones.** This subsection applies to all flood zones.
 - (1)** Subdivision proposals and development proposals must be consistent with the need to minimize flood damage and are subject to all applicable standards in this chapter.
 - (2)** Subdivision proposals and development proposals must locate and construct utilities and facilities, including but not limited to sewer, gas, electrical, and water systems, in a way that minimizes flood damage.

- (3) Subdivision proposals and development proposals must include drainage paths adequate to reduce exposure to flood hazards and to guide floodwaters around and away from proposed structures.
 - (4) Subdivision proposals and development proposals containing at least 5 lots or at least 5 acres, whichever is the lesser, that are wholly or partially in flood hazard areas where base flood elevation data are not provided by the Floodplain Administrator or available from other sources must be supported by determinations of base flood elevations.
 - (5) The driving surface of subdivision access roads must be at or above the base flood elevation.
- (b) **Special flood hazard areas.** This subsection applies to special flood hazard areas of nontidal waters of the State.
- (1) Subdivision proposals shall be laid out such that proposed building pads are located outside of the special flood hazard area and any portion of platted lots that include land areas that are below the base flood elevation shall be used for other purposes, deed restricted, or otherwise protected to preserve it as open space.
 - (2) The driving surface of subdivision access roads must be at or above the base flood elevation.

§ 31-18. Protection of water supply and sanitary sewage systems.

- (a) **Water supply systems.** New and replacement water supply systems must be designed to minimize or eliminate infiltration of floodwaters into the systems.
- (b) **Sanitary sewage systems.** New and replacement sanitary sewage systems must be designed to minimize or eliminate infiltration of floodwaters into systems and discharges from systems into floodwaters.
- (c) **On-site waste disposal systems.** On-site waste disposal systems must be located to avoid impairment to or contamination from them during conditions of flooding.

§ 31-19. Buildings and structures.

- (a) **In general.** This section applies to the construction of new structures including the placement and replacement of manufactured homes and the substantial improvement of existing structures (including manufactured homes).
- (b) **Special flood hazard areas.** Structures that are located, in whole or in part, in any special flood hazard area must:
 - (1) be designed (or modified) and constructed to safely support flood loads, including a complete load path capable of transferring all loads from their point of origin through the load-resisting elements to the foundation;
 - (2) be designed, connected, and anchored to resist flotation, collapse or permanent lateral movement due to structural loads and stresses, including hydrodynamic

and hydrostatic loads and the effects of buoyancy, from flooding equal to the flood protection elevation or the elevation required by these regulations or the building code, whichever is higher;

- (3) be constructed by methods and practices that minimize flood damage;
- (4) use flood damage-resistant materials below the elevation of the lowest floor required;
- (5) have the electric panelboard elevated at least 3 feet above the BFE;
- (6) comply with the requirements of the most restrictive designation if located on a site that has more than one flood zone designation; and
- (7) have electrical systems, equipment and components, and mechanical, heating, ventilating, air conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment located at or above the elevation of the lowest floor required. Electrical wiring systems are permitted to be located below elevation of the lowest floor provided they conform to the provisions of the electrical code for wet locations. If replaced as part of a substantial improvement, electrical systems, equipment and components, and heating, ventilation, air conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment shall meet the requirements of this section. Electrical systems, equipment and components, and heating, ventilating, air conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment are permitted to be located below the elevation of the lowest floor provided they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to that elevation.

§ 31-20. Placement of fill.

- (a) **Disposal.** Disposal of fill, including but not limited to earthen soils, rock, rubble, construction debris, woody debris, and trash, is not permitted in special flood hazard areas.
- (b) **Elevation.** Fill proposed to be placed to elevate structures in flood hazard areas (A Zones) must comply with the floodways requirements of Article IV of this chapter.

§ 31-21. Historic structures.

Unless the Floodplain Administrator determines that the proposed work will not preclude the structure's continued designation as a historic structure, if the proposed work is determined to be a substantial improvement the repair, alteration, addition, rehabilitation, or other improvement of historic structures is subject to the requirements of this chapter. The Floodplain Administrator may require documentation of a structure's continued eligibility and designation as a historic structure.

§ 31-22. Manufactured homes.

- (a) **Floodways.** New manufactured homes may not be placed or installed in floodways.

- (b) **Outside of floodways, flood hazard areas.** This subsection applies to new manufactured homes located outside of floodways, replacement manufactured homes in any flood hazard areas, and substantial improvement (including repair of substantial damage) of existing manufactured homes in all flood hazard areas. A manufactured home must meet the following requirements:
- (1) A manufactured home must be elevated on a permanent, reinforced foundation in accordance with Article IV of this chapter, as applicable to the flood zone.
 - (2) A manufactured home must be installed in accordance with the anchor and tie-down requirements of the building code or the manufacturer's written installation instructions and specifications.
- (c) **Enclosures below the lowest floor.** Any enclosures below the lowest floor of the elevated manufactured home, including enclosures that are surrounded by rigid skirting or other material that is attached to the frame or foundation, must comply with the requirements of Article IV of this chapter. For purposes of this chapter, the lowest floor of a manufactured home is the bottom of the lowest horizontal supporting member (longitudinal chassis frame beam).

§ 31-23. Recreational vehicles. Recreational vehicles must be fully licensed and ready for highway use; meet the requirements for manufactured homes per § 31-22 of this article; or be on site for less than 180 days.

§ 31-24. Critical and essential facilities.

- (a) **Floodways.** A critical and essential facility may not be located in floodways.
- (b) **Other flood hazard areas.** In flood hazard areas other than floodways, a critical and essential facility must be elevated to the higher of elevation required by this article plus 1 foot, the elevation required by the building code, or the elevation of the 0.2 % chance (500-year) flood.

§ 31-25. Temporary structures and temporary storage.

- (a) **Application.** In addition to the application requirements of § 31-12 of this chapter, applications for the placement or erection of temporary structures and the temporary storage of any goods, materials, and equipment, must specify the duration of the temporary use.
- (b) **Floodways.** Temporary structures and temporary storage in floodways are subject to the limitations of Article IV of this chapter.
- (c) **Requirements.** Temporary structures must:
- (1) be designed and constructed to prevent flotation, collapse, or lateral movement resulting from hydrodynamic loads and hydrostatic loads during conditions of the base flood;
 - (2) have electric service installed in compliance with the applicable electric codes;

- (3) comply with all other requirements of the applicable State and local permit authorities; and
- (4) not be used to store hazardous materials.

§ 31-26. Gas or liquid storage tanks.

- (a) **Underground tanks.** Underground tanks in flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the base flood.
- (b) **Above-ground tanks.** Above-ground tanks in flood hazard areas shall be anchored to a supporting structure and elevated to or above the base flood elevation or shall be anchored or otherwise designed and constructed to prevent flotation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood.
- (c) **Inlets, openings, outlets, and vents.** In flood hazard areas, tank inlets, fill openings, outlets, and vents must be:
 - (1) At or above the base flood elevation or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the base flood; and
 - (2) Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood.

§ 31-27. Functionally dependent uses.

Applications for functionally dependent uses that do not conform to the requirements of this article will be approved only by variances issued pursuant to this chapter. If approved, functionally dependent uses must be protected by methods that minimize flood damage during the base flood, including measures to allow floodwaters to enter and exit, use of flood damage-resistant materials, and elevation of electric service and equipment to the extent practical given the use of the building.

ARTICLE IV. REQUIREMENTS IN FLOOD HAZARD AREAS (A ZONES).

§ 31-28. Scope.

- (a) **Areas.** The requirements of this article apply in flood hazard areas, referred to collectively as "A Zones," which include special flood hazard areas along nontidal waters of the State and
- (b) **In general.** This article applies to all development, new construction, substantial improvements (including repair of substantial damage), and placement, replacement, and substantial improvement (including repair of substantial damage) of manufactured homes.

§ 31-29. Flood protection setbacks

- (a) **Scope.** This section applies within areas defined by flood protection setbacks along nontidal waters of the State:
- (b) **Restrictions.** No new buildings, structures, or other development shall be permitted unless the applicant demonstrates that the site cannot be developed without such encroachment into the flood protection setback and the encroachment is the minimum necessary after consideration of varying other siting standards such as side, front, and back lot line setbacks;
- (c) **Disturbance.** Disturbance of natural vegetation must be minimized and any disturbance allowed must be vegetatively stabilized; and
- (d) **Public works and temporary construction.** Public works and temporary construction may be permitted.

§ 31-30. Development that affects flood-carrying capacity of nontidal waters of the State.

- (a) **Alternatives.** For proposed development that will encroach into a designated floodway, the applicant shall submit an evaluation of alternatives to such encroachment, including different uses of the site or the portion of the site within the floodway, and minimization of such encroachment. This requirement does not apply to fences that do not block the flow of floodwaters or trap debris.
- (b) **Floodways.** Proposed development in a designated floodway may be permitted only if:
 - (1) the applicant has been issued a permit by MDE; and
 - (2) the applicant has developed hydrologic and hydraulic engineering analyses and technical data prepared by a licensed professional engineer reflecting such changes, and the analyses, which shall be submitted to the Floodplain Administrator, demonstrate that the proposed activity will not result in any increase in the base flood elevation.
- (c) **Placement of fill.** For proposed development that includes the placement of fill in nontidal waters of the State, other than development that is subject to subsection (d) of this section, a hydraulically-equivalent volume of excavation is required. Such excavations shall be designed to drain freely.
- (d) **Special flood hazard areas.** For development in special flood hazard areas of nontidal waters of the State with base flood elevations but no designated floodways:
 - (1) The applicant shall develop hydrologic and hydraulic engineering analyses and technical data reflecting the proposed activity and shall submit such technical data to the Floodplain Administrator. The analyses must be prepared by a licensed professional engineer in a format required by FEMA for a Conditional Letter of Map Revision and a Letter of Map Revision upon completion of the project. Submittal requirements and fees are the responsibility of the applicant.

- (2) The proposed development may be permitted if the applicant has received a permit by MDE and if the analyses demonstrate that the cumulative effect of the proposed development, when combined with all other existing and potential flood hazard area encroachments will not increase the base flood elevation more than 1.0 foot at any point.
- (e) **Roads, bridges, etc.** Construction of roads, bridges, culverts, dams, and in-stream ponds in nontidal waters of the State shall not be approved unless they comply with this section and the applicant has received a permit from MDE.
- (f) **Alteration of a watercourse.** Alteration of a watercourse may be permitted in accordance with this subsection.
 - (1) For any proposed development that involves alteration of a watercourse not subject to subsection (c) of this section unless waived by MDE, the applicant shall develop hydrologic and hydraulic engineering analyses and technical data reflecting such changes, including the required floodway analysis, and submit such technical data to the Floodplain Administrator and to FEMA. The analyses must be prepared by a licensed professional engineer in a format required by MDE and by FEMA for a Conditional Letter of Map Revision and a Letter of Map Revision upon completion of the project. Submittal requirements and fees shall be the responsibility of the applicant.
 - (2) Alteration of a watercourse may be permitted only upon submission, by the applicant, of the following:
 - (A) a description of the extent to which the watercourse will be altered or relocated;
 - (B) a certification by a licensed professional engineer that the flood-carrying capacity of the watercourse will not be diminished;
 - (C) evidence that adjacent communities, the U.S. Army Corps of Engineers, and MDE have been notified of the proposal, and evidence that such notifications have been submitted to FEMA; and
 - (D) evidence that the applicant will be responsible for providing the necessary maintenance for the altered or relocated portion of the watercourse so that the flood carrying capacity will not be diminished. The Floodplain Administrator may require the applicant to enter into an agreement with the City specifying the maintenance responsibilities. If an agreement is required, the permit will be conditioned to require that the agreement be recorded on the deed of the property and binding on future owners.

§ 31-31. Residential structures and residential portions of mixed use structures.

- (a) **In general.** New residential structures and residential portions of mixed use structures, and substantial improvement (including repair of substantial damage) of existing residential structures and residential portions of mixed use structures shall comply with the applicable requirements of Article III of this chapter and this section.

(b) Elevation requirements.

- (1)** Lowest floors shall be elevated to or above the flood protection elevation.
- (2)** In areas of shallow flooding (Zone AO), the lowest floor (including basement) shall be elevated at least as high above the highest adjacent grade as the depth number specified in feet on the FIRM plus 2 feet, or at least 4 feet if a depth number is not specified.
- (3)** Enclosures below the lowest floor shall meet the requirements of subsection (d) of this section.
- (4)** Basement floors that are below grade on all sides are prohibited.

(c) Fill – raising ground level. Unless otherwise restricted by this chapter, fill placed for the purpose of raising the ground level to support a building or structure shall:

- (1)** consist of earthen soil or rock materials only;
- (2)** extend laterally from the building footprint to provide for adequate access as a function of use;
- (3)** comply with the requirements of the City's Building Code and be placed and compacted to provide for stability under conditions of rising and falling floodwaters and resistance to erosion, scour, and settling;
- (4)** be sloped no steeper than 1 vertical to 2 horizontal, unless approved by the Floodplain Administrator;
- (5)** be designed with provisions for adequate drainage and no adverse effect on adjacent properties; and
- (6)** be protected from erosion associated with expected velocities during the occurrence of the base flood. Unless approved by the Floodplain Administrator, fill slopes shall be protected by vegetation if the expected velocity is less than 5 feet per second, and by other means if the expected velocity is 5 feet per second or more.

(d) Enclosures below lowest floor. This subsection applies to enclosures below the lowest floor.

- (1)** Enclosures may be used solely for parking of vehicles, building access, crawl/underfloor spaces, or limited storage.
- (2)** Enclosures must be constructed using flood damage-resistant materials.
- (3)** Enclosures must be provided with flood openings meeting the criteria of this paragraph.

- (A) There must be a minimum of two flood openings on different sides of each enclosed area. If a building has more than one enclosure below the lowest floor, each such enclosure shall have flood openings on exterior walls.
- (B) The total net area of all flood openings must be at least 1 square inch for each square foot of enclosed area (non-engineered flood openings), or the flood openings shall be engineered flood openings that are designed and certified by a licensed professional engineer to automatically allow entry and exit of floodwaters. The certification requirement may be satisfied by an individual certification or an Evaluation Report issued by the ICC Evaluation Service, Inc.
- (C) The bottom of each flood opening must be 1 foot or less above the higher of the interior floor or grade, or the exterior grade, immediately below the opening.
- (D) Any louvers, screens or other covers for the flood openings must allow the automatic flow of floodwaters into and out of the enclosed area.
- (E) If installed in doors, flood openings that meet requirements of subparagraph (A) through (D) of this paragraph, are acceptable; however, doors without installed flood openings do not meet the requirements of this section.

§ 31-32. Nonresidential structures and nonresidential portions of mixed use structures.

- (a) **In general.** New nonresidential structures and nonresidential portions of mixed use structures, and substantial improvement (including repair of substantial damage) of existing nonresidential structures and nonresidential portions of mixed use structures shall comply with the applicable requirements of Article III of this chapter and this section.
- (b) **Elevated structures.** Elevated structures shall have the lowest floor (including basement) elevated to or above the flood protection elevation or
 - (1) in areas of shallow flooding (Zone AO), have the lowest floor (including basement) elevated at least as high above the highest adjacent grade as the depth number specified in feet on the FIRM plus 2 feet, or at least 4 feet if a depth number is not specified;
 - (2) have enclosures below the lowest floor, if any, that comply with the requirements of § 31-31(d) of this chapter; and
 - (3) if proposed to be elevated on fill, meet the limitations on fill in § 31-31(c) of this chapter.
- (c) **Basement floors.** Basement floors that are below grade on all sides are prohibited.
- (d) **Floodproofing.** Floodproofing of new nonresidential buildings is not allowed in nontidal waters of the State. Floodproofing for substantial improvement of nonresidential buildings is allowed in nontidal waters of the State. If floodproofing is proposed, structures must be designed to be dry floodproofed such that the building or structure is watertight with walls

and floors substantially impermeable to the passage of water to the level of the flood protection elevation plus 1.0 foot or

- (1) if located in an area of shallow flooding (Zone AO), be dry floodproofed at least as high above the highest adjacent grade as the depth number specified on the FIRM plus 3 feet, or at least 5 feet if a depth number is not specified;
- (2) have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;
- (3) have floodproofing measures that are designed taking into consideration the nature of flood-related hazards; frequency, depth and duration of flooding; rate of rise and fall of floodwater; soil characteristics; flood-borne debris; at least 12 hours of flood warning time from a credible source; and time necessary to implement any measures that require human intervention;
- (4) have at least one door above the applicable flood elevation that allows human ingress and egress during conditions of flooding;
- (5) have an operations and maintenance plan that is filed with local emergency management officials and that specifies the owner/occupant's responsibilities to monitor flood potential; the location of any shields, doors, closures, tools, or other goods that are required for implementation; maintenance of such goods; methods of installation; and periodic inspection; and
- (6) be certified by a licensed professional engineer or licensed architect, through execution of a Floodproofing Certificate that states that the design and methods of construction meet the requirements of this section. The Floodproofing Certificate shall be submitted with the required construction drawings.

§ 31-33. Horizontal additions

- (a) **Requirements.** A horizontal addition proposed for a building or structure that was constructed after June 15, 1978 shall comply with the applicable requirements of Article III of this chapter and this section.
- (b) **No structural connection.** In nontidal waters of the State that are subject to the regulatory authority of MDE, all horizontal additions shall comply with the applicable requirements of Article III of this chapter and this section. If the addition has an independent foundation and is not structurally connected to the base building and the common wall with the base building is modified by no more than a doorway, the base building is not required to be brought into compliance.
- (c) **Structural connection.** For horizontal additions that are structurally connected to the base building:
 - (1) If the addition combined with other proposed repairs, alterations, or modifications of the base building constitutes substantial improvement, the base building and the addition shall comply with the applicable requirements of Article III and this section.

- (2) If the addition constitutes substantial improvement, the base building and the addition shall comply with all of the applicable requirements of Article III and this section.
- (d) **Exception.** A horizontal addition to a building or structure that is not a substantial improvement and is not located in nontidal waters of the State is not required to comply with this section.

§ 31-34. Accessory structures

- (a) **Footage.** Accessory structures are limited to not more than 300 square feet in total floor area.
- (b) **Requirements.** Accessory structures must comply with the elevation requirements and other requirements of § 31-31 of this article, the floodproofing requirements of § 31-32(d) of this article, or must:
 - (1) be useable only for parking of vehicles or limited storage;
 - (2) be constructed with flood damage-resistant materials below the base flood elevation;
 - (3) be constructed and placed to offer the minimum resistance to the flow of floodwaters;
 - (4) be anchored to prevent flotation;
 - (5) have electrical service and mechanical equipment elevated to or above the base flood elevation; and
 - (6) have flood openings that meet the requirements of § 31-31(d) of this article.

§ 31-35. Other structures and development.

- (a) **Decks and patios.** In addition to the requirements of the building code or the residential code, decks and patios shall be located, designed, and constructed in compliance with this subsection.
 - (1) A deck that is structurally attached to a building or structure shall have the top of the lowest horizontal structural member at or above the flood protection elevation and any supporting members that extend below the design flood elevation shall comply with the foundation requirements that apply to the building or structure, which shall be designed to accommodate any increased loads resulting from the attached deck.
 - (2) A deck or patio that is located below the flood protection elevation shall be structurally independent from structures and their foundation systems and shall be designed and constructed either to remain intact and in place during base flood conditions or to break apart into small pieces that will not cause structural damage to adjacent elevated structures.

- (3) A deck or patio that has a vertical thickness of more than 12 inches or that is constructed with more than the minimum amount of fill that is necessary for site drainage shall not be approved unless an analysis demonstrates no harmful diversion of floodwaters that would increase damage to adjacent elevated structures.
 - (4) A deck or patio that has a vertical thickness of 12 inches or less and that is at natural grade or on fill material that is similar to and compatible with local soils and is the minimum amount necessary for site drainage may be approved without requiring analysis of the impact on diversion of floodwaters.
- (b) **Other Development.** Other development activities may be permitted only if located outside the footprint of, and not structurally attached to, structures. Analysis may be required to demonstrate there will be no harmful diversion of floodwaters onto adjacent elevated structures. Other development includes but is not limited to:
- (1) retaining walls and similar erosion control structures;
 - (2) solid fences, privacy walls, and fences prone to trapping debris, unless designed and constructed to fail under base flood conditions; and
 - (3) above-ground swimming pools.

§ 31-36. Operation and Maintenance Manual for the Carroll Creek Flood Control Project

- (a) **Incorporation by Reference.** The Operation and Maintenance Manual for the Carroll Creek Flood Control Project, as adopted by the Mayor and Board of Aldermen by Resolution 01-11, is hereby incorporated into this section by this reference.
- (b) **Purpose.** The Operation and Maintenance Manual was prepared in accordance with NFIP regulations to describe the general features of the Carroll Creek Flood Control Project and provide detailed instructions for the maintenance of the project, including the maintenance obligations required by the LOMR for the project.
- (c) **Staff responsibilities.** The Director of Public Works shall be responsible for the maintenance of the project, staffing key positions to handle all contingencies, periodic drills in the necessary steps of operation of the project during high water, emergency operations, methods of repair, and the documentation of maintenance activities and drills. The Engineering Department shall be responsible for periodic reports to FEMA and any necessary design changes.

ARTICLE V. VARIANCES AND APPEALS.

§ 31-37. General.

- (a) **Floodplain Review Board.** A Floodplain Review Board is hereby established to hear and decide requests for variances and appeals in accordance with this article. Board members shall consist of the City Engineer, the Engineering Department Manager, the Manager of Hydraulics and Hydrology, the Deputy Director for Planning, and the Building Department Manager.

- (b) **In general.** The Floodplain Review Board shall consider and authorize or deny variances from the strict application of the requirements of this chapter. A variance shall be approved only if it is determined to not be contrary to the public interest and where, owing to special conditions of the lot or parcel, a literal enforcement of the provisions of these regulations, an unnecessary hardship would result.
- (c) **Conditions.** Upon consideration of the purposes of this chapter, the individual circumstances, and the considerations and limitations of this section, the Floodplain Review Board may attach such conditions to variances as it deems necessary to further the purposes of these regulations.
- (d) **Nonconversion agreements.** No variance shall be granted for an accessory structure exceeding 600 square feet in area (footprint). A signed Declaration of Land Restriction (Nonconversion Agreement) is required as a condition of receiving the variance. The Agreement must be recorded with the Deed. If a variance is granted and the accessory structure is not elevated or dry flood proofed, the conditions in § 31-34, apply.
- (e) **Notice.** The Floodplain Review Board shall notify, in writing, any applicant to whom a variance is granted to construct or substantially improve a building or structure with its lowest floor below the elevation required by these regulations that the variance is to the floodplain management requirements of these regulations only, and that the cost of Federal flood insurance will be commensurate with the increased risk, with rates up to \$25 per \$100 of insurance coverage.
- (f) **Records.** The Floodplain Administrator shall retain a record of all variance actions, including justification for issuance, in accordance with the applicable records retention schedule.

§ 31-38. Applications.

- (a) The owner of property, or the owner's authorized agent, for which a variance is sought shall submit an application for a variance to the Floodplain Administrator.
- (b) Variance applications must specifically address each of the considerations in § 31-39 of this article. At a minimum, the application must contain the following information:
 - (1) name, address, and telephone number of the applicant and property owner;
 - (2) legal description of the property;
 - (3) parcel map;
 - (4) description of the existing use; description of the proposed use; site map showing the location of flood hazard areas, designated floodway boundaries, flood zones, base flood elevations, and flood protection setbacks; description of the variance sought; and reason for the variance request.
- (c) If the application is for a variance to allow the lowest floor (A Zones) of a building or structure below the applicable minimum elevation required by this chapter, the application shall include a statement signed by the owner that, if granted, the conditions of the variance shall be recorded on the deed of the property.

§ 31-39. Considerations for variances.

- (a) **Comments.** The Floodplain Administrator shall request comments on variance applications from MDE (NFIP State Coordinator) and shall provide such comments to the Floodplain Review Board.
- (b) **Findings.** In considering variance applications, the Floodplain Review Board shall consider and make findings of fact on all evaluations, all relevant factors, requirements specified in other sections of this chapter, and the following factors:

 - (1) the danger that materials may be swept onto other lands to the injury of others;
 - (2) the danger to life and property due to flooding or erosion damage;
 - (3) the susceptibility of the proposed development and its contents (if applicable) to flood damage and the effect of such damage on the individual owner;
 - (4) the importance of the services to the community provided by the proposed development;
 - (5) the availability of alternative locations for the proposed use which are not subject to, or are subject to less, flooding or erosion damage;
 - (6) the necessity to the facility of a waterfront location, where applicable, or if the facility is a functionally dependent use;
 - (7) the compatibility of the proposed use with existing and anticipated development;
 - (8) the relationship of the proposed use to the comprehensive plan and hazard mitigation plan for that area;
 - (9) the safety of access to the property in times of flood for passenger vehicles and emergency vehicles;
 - (10) the expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site;
 - (11) the costs of providing government services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges; and
 - (12) the comments provided by MDE (NFIP State Coordinator).
- (c) **Criteria.** The Floodplain Review Board shall make an affirmative decision on a variance request only upon a determination that all of the criteria of this subsection are met.

 - (1) Good and sufficient cause exists. "Good and sufficient cause" deals solely with the physical characteristics of the property and cannot be based on the character of the improvement, the personal characteristics of the owner/inhabitants, or local provision that regulate standards other than health and public safety.

- (2) Failure to grant the variance would result in exceptional hardship due to the physical characteristics of the property. Increased cost or inconvenience of meeting the requirements of these regulations does not constitute an exceptional hardship to the applicant.
- (3) The granting of a variance for development within any designated floodway, or flood hazard area with base flood elevations but no designated floodway, will not result in increased flood heights beyond that which is allowed in this chapter.
- (4) The granting of a variance will not result in additional threats to public safety; extraordinary public expense, nuisances, fraud or victimization of the public, or conflict with existing local laws.
- (5) The building, structure or other development is protected by methods to minimize flood damages.
- (6) The variance is the minimum necessary to afford relief, considering the flood hazard.

§ 31-40. Appeals.

- (a) A person aggrieved by a decision of the Floodplain Administrator under this Chapter may file an appeal in writing with the Floodplain Review Board within 10 days after receiving notice of the Floodplain Administrator's decision.
- (b) The Board may reverse, modify or remand the decision of the Floodplain Administrator only if the decision is clearly erroneous, illegal, arbitrary or capricious or unsupported by any substantial evidence. The Board does not have the authority to issue an order which is in conflict with the requirements and provisions of this Chapter or the Federal or State floodplain regulations.
- (c) Any person aggrieved by a decision made by the Mayor under this chapter may, within 30 days after such decision, file a petition for judicial review with the Circuit Court for Frederick County in accordance with the Maryland Rules governing judicial review of administrative agency actions.

ARTICLE VI. ENFORCEMENT.

§ 31-41. Compliance required.

No building, structure or development may be located, erected, constructed, reconstructed, improved, repaired, extended, converted, enlarged or altered except in compliance with this chapter and all other applicable regulations.

§ 31-42. Permits.

Permits issued on the basis of plans and applications approved by the Floodplain Administrator authorize only the specific activities set forth in such approved plans and applications or amendments thereto. Use, arrangement, or construction of such specific activities that are

contrary to that authorization will be deemed a violation of this chapter. Failure to obtain a permit is a violation of this chapter and shall be subject to penalties in accordance with this article.

§ 31-43. Notices of violation and stop work orders.

- (a) **In general.** If the Floodplain Administrator determines that there has been a violation of any provision of this chapter, the Floodplain Administrator shall give notice of the violation to the owner, the owner's authorized agent, and the person responsible for such violation, and may issue a stop work order.
- (b) **Contents.** A notice of violation or stop work order must be in writing and include the following:
 - (1) a description of violations, including references to any section of this chapter that has been violated;
 - (2) an order to take whatever remedial action will effect compliance with the provisions of this chapter;
 - (3) a reasonable period of time to correct the violation; and
 - (4) an explanation of the right to appeal to the Floodplain Review Board.
- (c) **Service.** A notice of violation or stop work order must be:
 - (1) served in person; or
 - (2) posted in a conspicuous place in or on the property and sent by registered or certified mail to the last known mailing address, residence, or place of business of the recipients.


§ 31-44. Violations and penalties.

A violation of this chapter, or failure to comply with the requirements of this chapter or any conditions attached to a permit or variance, is a municipal infraction punishable by a fine not to exceed \$1,000. Each day a violation continues shall be considered a separate offense. In addition, the City may take any other action necessary to prevent or remedy any violation.

SECTION II. BE IT FURTHER ENACTED AND ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF FREDERICK that this ordinance shall take effect on November 1, 2021 and all other ordinances or parts of ordinances inconsistent with the provisions of this ordinance will as of that date be repealed to the extent of such inconsistency.

PASSED:

DATE:


**Michael C. O'Connor, President,
Board of Aldermen**

October 7, 2021

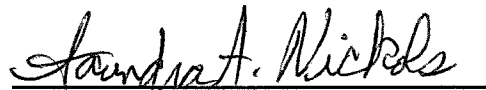
APPROVED:

DATE:


Michael C. O'Connor, Mayor

October 7, 2021

Approved for Legal Sufficiency:


City Attorney